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ROLE OF THE INSTRUCTOR IN MAXIMIZING ACADEMIC ACHIEVEMENT IN COMPUTER-BASED TRAINING

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SUMMARY

The question of what an instructor should do in computer-based training (CBT) has not been answered. Although research on the role of the instructor in traditional instruction (TI) has produced a relatively high degree of consensus as to what an effective TI instructor does, CBT research has not examined the instructor's influence on achievement. The results of comparing the CBT environment with known, effective TI instructor behaviors suggest that in CBT effective TI instructor variables related to presenting the course material are allocated to the computer-based software, whereas effective TI instructor variables related to classroom management remain with the instructor. Compared to a TI instructor, a CBT instructor has fewer variables to use to influence academic achievement. In order to maximize achievement, CBT instructors must take full advantage of the reduced opportunities they still control. Moreover, CBT instructors must also insure that CBT software includes those effective variables which were previously under the control of the TI instructor but which are now under the control of the computer-based software. A research program to study the CBT instructor's role with regard to academic achievement is recommended.

PREFACE

This paper summarizes the initial investigation of the role of the instructor in a computer-based training environment. This research was conducted under the United States Air Force Summer Faculty Research Program and was sponsored by Air Force Office of Scientific Research/AFSC, United States Air Force, under Contract F49620-88-C-0053. The author would like to express his appreciation to Col Rodger D. Ballentine, Dr. Hendrick W. Ruck, Dr. Joseph Scott Newcomb, and the entire AFHRL/ID staff for their support.

TABLE OF CONTENTS

LIST OF TABLES

ROLE OF THE INSTRUCTOR IN MAXIMIZING ACADEMIC ACHIEVEMENT IN COMPUTER-BASED TRAINING (CBT)

I. INTRODUCTION

The basic emphasis in computer-based training (CBT) (which is used here as a generic label for all computer-based education) research has been the comparison of a CBT course with a corresponding traditional instruction (TI) course. A large body of research on CBT has accumulated, and the results have usually been positive. CBT generally produces increases in learning and retention while concurrently requiring less time than TI (Fletcher & Rockway, 1986; Krendl & Lieberman, 1988; Kulik & Kulik, 1986, 1987; Neimiec, Samson, Weinstein, & Walberg 1987; O'Neil, Anderson, & Freeman, 1986). However, results have not always been positive, and there have been instances in which CBT did not produce increases in performance or decreases in time (see the previous references plus Goodwin, Goodwin, Nansel, & Helm, 1986; McCombs, Back, & West, 1984). Moreover, Kulik and Kulik (1987) reported that the number of unsuccessful CBT attempts increased as their review went from articles in refereed journals down to lower level publications such as dissertations. Given the tremendous variation in software, hardware, and degree of computerization in CBT, it is not surprising that the research has produced inconsistent results.

The role of the instructor has received little CBT research emphasis. Conversely, research on the role of the instructor in TI has produced a relatively high degree of consensus on what an effective instructor does versus what a not-so-effective instructor does. However, other than to assume that CBT instructors should become computer literate (e.g., Troyer, 1988), CBT research has not treated the role of the instructor as a significant factor.

The CBT instructor has occasionally been mentioned. Bork (1985) in a discussion of the LOGO program stated, "While very competent Logo teachers do do something, it is never entirely clear exactly what kind of help, assistance, or guidance they provide" (p. 54). Bear (1984) concluded that ". . . future research will find CAI (Computer Assisted Instruction) to be effective in those classrooms that are characterized by the same elements of instruction that previously research has shown to be associated with effective teachers" (p. 12).

Bear's (1984) assumption may have not been accurate. It may be that a CBT and a TI environment are sufficiently different so as to alter the instructor behaviors which maximize performance. Or, his assumption may have been accurate, but CBT developers have not paid attention to the role of the instructor and therefore have neglected to include variables which maximize the effect of the instructor. Unfortunately, the future research mentioned by Bear has not been conducted, and the role of the instructor in CBT is still an open question.

The purpose of this paper is to review the role of the CBT instructor, to summarize implications about that role, and to make conclusions about the future study of that role.

II. GENERAL PROBLEM

Since the primary purpose of any instructor is to promote academics, a primary research focus in CBT should be the influence of the instructor on achievement. There is a relatively high degree of consensus on what an effective TI instructor does versus what a not-so-effective instructor does. Do these results transfer to CBT? Are these results being considered in CBT? If the behaviors identified as being effective in TI are not transferable to CBT, what CBT instructor behaviors do influence achievement? Can the CBI instructor influence achievement? At the present time, there are no answers to these questions.

Consequently, there is little agreement or even discussion on how to effectively use instructors in CBT. Even recently proposed CBT courseware evaluation systems do not include an instructor dimension (Schwarz & Lewis, 1989). As a result, during CBT design and implementation the role of the instructor is not fully addressed, perhaps to the detriment of the CBT system.

III. COMPARISON BETWEEN TRADITIONAL INSTRUCTION AND COMPUTER-BASED TRAINING

At a macro level, CBT and TI share a general description. Both involve bringing students and course material together for the purpose of the students learning the material. Trying to compare CBI and TI at a micro level poses more of a problem in that there is not an accepted definition of what is a CBT environment. CBT can range from using printed material which contains an example of a computer printout to using a completely automated training system, one in which all of the instruction is presented on a terminal. For the purpose of comparing CBT and TI, this paper will use a formal (versus on-the-job training (OJT)), completely automated CBT system. While such a CBT system exists in only a few instances, using the completely automated CBT system as the basis for comparison will permit the reader to scale this discussion down to the specifics of his or her individual CBT system.

Traditional Instruction

The typical TI environment contains an instructor who is knowledgeable in the subject material and who presents the course material in one or more presentation modes. The most typical mode is the traditional platform lecture. Other TI modes are question and answer, discussion, seatwork, and audio-visual aids (e.g., films, sound-on-slide, television, etc.).

The instructor not only presents the material but also controls what is presented, the method of presentation, the rate of presentation, and the atmosphere of the learning environment (e.g., course management, classroom discipline, student attention, student attitude, etc.). Control implies that the instructor can modify these variables. For instance, while an instructor is largely bound by the prescribed course curriculum, he or she can select exactly what is taught along with the mode of presentation. Also, the instructor is directly responsible for how the course is managed as well as the degree of discipline that exists. In addition to being the source of expertise, the instructor is also the course administrator and the one who establishes the learning atmosphere for the classroom.

Due to the large number of student-instructor contacts which occur in TI, the student also comes to view the instructor as a source of advice and social interaction. Because of the social nature of the TI classroom, the instructor becomes a source of a wide and varied amount of collateral learning. For example, not only is the instructor a source of attitudes about school, he or she is also a source of attitudes about adult life in general. The TI instructor has the capability of being a tremendous influence on a student, both with regard to the course material and with regard to life outside the classroom.

Computer-Based Training

The completely automated CBT system differs markedly from a TI system. With regard to the course work, the material is presented on a terminal; therefore, method of and what is presented are fixed. Rate of presentation is under the control of either the software or the student, provided that the software has an interactive capability. The instructor does not interact with the student during the learning process and may only interact infrequently with the

student outside the learning process. The primary purpose of the CBT instructor is to establish procedure, provide policy, and administer the course.

Who or what controls classroom discipline and the atmosphere of the course is divided in CBT. In a completely automated system, many of the course management functions may be built into the software. Discipline is obviously still the responsibility of the instructor. However, the atmosphere of the class is a combination of the behavior of the instructor and how the student interacts with the computer terminal.

The CBT system does not provide the opportunity for frequent student-instructor interaction. Naturally occurring collateral learning may not happen.

TI and CBT Comparison

CBT and TI differ on several dimensions. CBT is a more controlled environment; i.e., with regard to presenting the student to the material, there is less variability in the CBT environment than in the TI environment. Since CBT may make use of the latest in technology, it may always be more state-of-the-art. Due to procedural tools which can be built into a CBT course, the CBT course may be better managed.

However, CBT changes the amount and content of student-instructor interactions. Typically, the CBT instructor addresses the students only at the beginning and at the end of the class period. During these times the instructor covers topics which are not related to course material but which are related to discipline, policy, and procedure. If an instructor does interact with a student, it may only be after an error; e.g., when the instructor has to come to the student's terminal to correct a mistake. These changes in the amount and content of student-instructor interactions have several consequences.

1. The instructor may no longer be considered the primary source of expertise.

2. The capability of the instructor to set the academic learning atmosphere for the class may be diminished.

3. The instructor may have less time to establish and administer classroom discipline on a continuing basis.

4. The majority of the student-instructor, 1:1 interactions may be negative.

5. The opportunity for collateral learning may be reduced.

There is also the question of how the computer environment is perceived by the student. Coming from a high school environment in which TI is overwhelmingly the mode of presentation, a trainee may not initially have a favorable attitude about a computer-based environment. Many people simply do not take readily to a computer. For them, CBT is a negative situation both because it does not offer the well known and comfortable lecture-by-human-instructor format and also because the material must now be obtained from an impersonal machine.

The instructor also has the problem of determining what to do in CBT. In TI classroom activity revolves around the instructor; in CBT it does not. Consequently, CBT instructors may be at a loss as to what to do with their time. Moreover, TI behaviors and skills may not be appropriate in CBT. CBT is truly a radically different environment for the instructor.

Finally, from the instructor's perspective, CBT may not be as rewarding as TI. The only time the instructor may interact with a student on a 1:1 basis is after an error or to administer discipline. CBT also removes from the instructor the opportunity to demonstrate to someone how to do something. This opportunity may be a primary reward for an instructor; if you remove it, you remove a prime reason for being an instructor. CBT instructors who spend most of their time monitoring student progress on the terminal, correcting student errors while on the terminal, presenting classroom policy, and administering discipline may not view this type of instructing as being rewarding. When an instructor does not find CBT as rewarding as TI, his or her capability to be a motivating force in the classroom is diminished.

Moreover, replacing the traditional subject-matter expert instructor with a course administrator does not guarantee that the instructor's motivational function will be restored. A non-expert instructor may be able to administer a course but may not be perceived by the students as a motivator.

In summary, CBT and TI create different learning environments. It is not clear that they are equivalent. What works in one may or may not work in the other.

IV. ROLE OF THE INSTRUCTOR IN COMPUTER-BASED TRAINING

Although several studies have touched upon the issue (e.g., Bear, 1984), no studies have been found which specifically investigated the effects of CBT instructor behavior on academic achievement (Gillingham & Guthrie, 1987). However, there have been attempts to determine what the CBT instructor's behaviors should be, as based on observed behavior of in-place CBT instructors. For example, Summers, Pelletier, and Spangenberg (1977) reported the results of a job analysis of 82 computer-managed instruction (CMI) instructors. These instructors reported that their most time-consuming tasks were:

1. circulating among students to observe progress,
2. tutoring,
3. maintaining discipline,
4. interpreting computer printouts and displays, and
5. counseling students.

McCombs, Dobrovolny, and Judd (1979) reported the results of the implementation of an Air Force CMI course. CMI instructors were given, in addition to information about CMI, training in problem-solving skills, diagnostic strategies, remediation procedures, and listening/probing skills. This training represented what was thought to be new to the role of the CMI instructor versus the instructors' previous role in TI.

McCombs, Back, and West (1984) conducted a case study analysis of both successful and unsuccessful Air Force self-paced training courses. Instructor factors consistently related to course success were:

1. high instructor dedication/motivation towards self-paced instruction, and
2. adequate opportunity for student/instructor interactions.

Instructor factors consistently related to unsuccessful courses were:

1. low instructor dedication/motivation toward self-paced instruction,
2. lack of deliberate efforts to keep instructor motivation high,
3. no well-defined instructor roles,
4. lack of instructor role training, and
5. inadequate opportunity for student/instructor interactions.

McCombs and Lockhart (1984) compared actual time spent data by CBT instructors with a theoretical model of time spent. The results are presented in Table 1.

Table 1. **Theoretical Versus Actual CBT Time Spent Data**

Rank order, theoretical model	**Rank order, actual time spent**
1. Counselor	1. Evaluator
2. Modeler	2. Implementor
3. Evaluator	3. Diagnostician
4. Diagnostician	4. Modeler
5. Remediator	5. Counselor
6. Implementor	6. Remediator
7. Planner	7. Equipment Maintainer[a]
	8. Planner
	9. Author[a]
	10. Miscellaneous[a]
	11. Supervisor[a]

[a]Roles not included in the model.

McCombs and Lockhart found that CBT instructors spent nearly 20% of their time in roles not included in the theoretical model. Also, Counselor, which ranked first in the theoretical model, ranked fifth in actual time spent.

It should be noted that the McCombs and Lockhart model represented what the authors thought a CBT instructor should do as based on past experiences with CMI. There was no attempt to directly link the model to academic achievement.

In summary, little work has been done on the effects of CBT instructor behavior on academic achievement. The work that has been done has focused on either what in-place CBT instructors are doing or on theoretical job dimensions of what CBT instructors should be doing.

V. ROLE OF THE INSTRUCTOR IN TRADITIONAL INSTRUCTION

Prior to the early 1970s, the results of the research on the effect of instructor behavior on academic achievement were somewhat discouraging. However, the earlier research focused on global characteristics, such as instructor personality types. Beginning in the middle 1970s, a new body of literature developed aimed at discovering specific behaviors which distinguished effective from non-effective instructors. This research was labeled process-product to signify that the research was trying to discover what types of instructor behavior (process) influenced academic achievement (product).

This research proved more productive, and by the 1980s reviews (Brophy, 1986; Brophy & Good, 1986; Rosenshine, 1983) appeared which summarized the TI instructor behaviors which seem to significantly impact student achievement. These reviews produced a general agreement about those behaviors which are positively and which are negatively linked to academic gain. The results are presented in Tables 2 and 3.

Table 2. **Instructor Behaviors Positively Related to Achievement**

Knowledge about course content
Business-like atmosphere created
Organized atmosphere created
Focus placed on academics
Praise (for task performance) given to students
Mild reproach given to students
Neutral feedback given to students
High percent of time spent on task
Student behavior controlled (academic)
Student behavior controlled (non-academic/physical)
Students warned vs. threatened over misconduct
Questions asked
Feedback provided
Student behavior monitored
Attitude created that students are accountable for their performance/achievement
Frequent but short interactions held
Presentations are:
clear
structured
organized

In addition to the specific behaviors listed above, the literature suggests that a critical aspect of a successful (i.e., high academic achievement) classroom is the atmosphere established by the instructor early in the course. This atmosphere contains both classroom management and learning dimensions; it also includes personal instructor characteristics (Table 4).

Several attempts have been made to categorize individual effective TI instructor behaviors into a manageable scheme. Brophy (1986) summarized the research into eight factors (Table 5).

Table 3. **Instructor Behaviors Negatively Related to Achievement**

Strong criticism given to students
Negative climate created
Non-response questions asked
Time spent on non-academics
Affective nature of course emphasized
Instructor does not interact with students
Instructor employs silent reading, independent study, or written assignments

Table 4. **Atmosphere Created by the Effective Instructor**

This is my classroom
I am in control
I am here for you to learn
I am going to teach you
I can teach you
You can learn
If you do not learn, it is my fault
You must abide by the rules if you are to learn the material
You will be held accountable for your performance
We must spend a high percent of our time on the task

Table 5. **Brophy Effective TI Instructor Dimensions**

1.	Opportunity to learn and content covered
2.	Role definition, expectation, and time allocation
3.	Classroom management and student-engagement
4.	Consistent success and academic learning time
5.	Active teaching
6.	Giving information
7.	Questioning
8.	Reacting to student responses

Borich (1989) used five factors to capture effective instructor behaviors; these are presented in Table 6.

These two schemes were designed primarily to capture what the effective instructor does in TI; these schemes were not concerned with whether or not effective TI instructor behaviors transfer to CBT. To more specifically relate effective TI instructor behaviors to CBT, the author developed the eight dimension scheme presented in Table 7.

This model was created to include variables often only assumed in TI (e.g., classroom atmosphere) but which may be overlooked and therefore neglected in CBT. Also, this model includes dimensions which do not appear to be behavioral (e.g., instructor locus-of-control) but which can be addressed on a behavioral basis.

Table 6. **Borich Effective TI Instructor Dimensions**

1. Clarity

   informs students of lesson objectives
   provides students with advance organizers
   checks for task-relevant prior learning
   gives directions slowly and distinctly
   provides reviews and/or summaries

2. Variety

   uses attention gaining devices
   shows enthusiasm
   varies mode of presentation
   uses a mix of rewards
   incorporates student ideas in some aspect of instruction
   varies types of questions

3. Task-Orientation

   develops unit and lesson plans on most critical features
   handles administration and clerical interruptions efficiently
   stops or prevents off-task behavior
   selects the most appropriate instructional mode
   builds to unit outcomes

4. Engagement in the Learning Process

   elicits the desired behavior immediately after the presentation of the material
   provides opportunities for non-evaluative feedback
   uses individual activities
   uses meaningful verbal praise
   monitors assignments

5. Success Rate

   establishes a content sequence that reflects prior learning
   administers correctives immediately after initial response
   divides instructional material into small chunks
   plans transitions to new material in easy-to-grasp steps
   varies the pace at which stimuli are presented

Table 7. **Stephenson Effective Instructor Dimensions**

1. Instructor attitude/orientation/role definition

   internal locus of control
   can do attitude
   planning/time management oriented
   must spend time-on-task
   personally responsible for student's performance
   task oriented

2. Classroom atmosphere/ethos

   learning environment
   pro-performance vs. pro-compliance
   task oriented
   warmth
   student held accountable for work

3. Classroom management

   few target errors
   few timing errors
   pro-active
   organized (plan ahead)
   brief transitions

4. Knowledge of material

5. Active teaching

   group settings and 1:1 situations
   monitor class work
   interact with students (task and non-task)
   praise (for task performance)

6. Content covered/time on task

7. Consistent success/academic learning time

   70% - 80% correct response

8. Presentation skills/behaviors

   clarity
   variety
   information provided
   feedback provided
   number of questions asked
   type of questions asked

At this juncture an important point should be made. Effective TI teachers may not be aware of all the behaviors they use to maximize achievement; e.g., they may not be able to verbalize the emphasis they place on creating the proper classroom atmosphere. When these teachers transfer from one TI classroom to another TI classroom, they simply take their behavior set with them, act in much the same manner, and produce similar results. However, when effective TI teachers transfer to CBT, some of their perhaps unverbalized effective behaviors are no longer under their control; these behaviors are now under the control of the CBT software. Moreover, because the role of the CBT instructor has been radically altered, the instructor may also fail to consider those perhaps subconscious behaviors previously used in TI to maximize achievement. Therefore, the CBT instructor must both be fully aware of and emphasize those behaviors which are still under his or her control. If the CBT instructor does not over-emphasize the remaining variables, part of the positive learning atmosphere may be lost. Consequently, achievement may never be as high as it would have been in TI simply because the capability of the total learning environment to produce achievement may be lessened.

VI. RELATIONSHIP BETWEEN TI INSTRUCTOR EFFECTS AND CBT

Given both that there are instructor behaviors which affect academic achievement in TI and also that the TI and the CBT environments can differ, a useful step would be to analyze whether effective TI instructor behaviors are controlled by the CBT software or the CBT instructor (Table 8).

Compared with Tables 2 and 3, Table 8 contains another variable: knowledge about CBT. In TI the instructor is primarily oriented towards the subject material. In CBT it may be necessary for the instructor to be expert in the computer-based instructional systems as well as (or in place of?) the course material.

VII. CONTROL OF EFFECTIVE TI INSTRUCTOR BEHAVIORS IN CBT

Section VI suggests that effective TI instructor behaviors may be separated into two categories in CBT. Effective TI instructor variables related to presenting the course material are allocated to the computer-based software, while TI effective class management variables are allocated to the CBT instructor. Therefore, it appears that in CBT (versus TI) the instructor's role may have shifted from one of presenter and course administrator to one of just course administrator.

If such a shift has occurred, then the number of instructor-controlled behaviors which can affect student achievement is reduced in CBT. Instead of being able to manipulate both course material presentation and classroom management variables, the CBT instructor primarily has just the classroom management variables at his or her disposal.

Table 9 merges the information presented in Table 7 and Table 8 and assigns dimension control in CBT to the instructor, the software, or both the instructor and the software.

VIII. IMPLICATIONS

If the conceptualization suggested in this paper is appropriate, it has several implications. First, it suggests that TI and CBT instructors do not perform identical behaviors. The TI instructor needs to have course material presentation skills (which implies having a competent knowledge of the subject matter) and course administration skills, while the CBT instructor needs to primarily have course administration skills (with the need for subject matter expertise questionable). Moreover, course administration may differ between TI and CBT; the CBT instructor

Table 8. **Effective TI Instructor Behaviors Compared to CBT Environment**

Behavior	Where controlled in CBT Soft/Inst[a]
Positive Behaviors	
Knowledge about course content	Both
Knowledge about CBT (?)	?
Business-like atmosphere created	Instructor
Organized atmosphere created	Both
Focus placed on academics	Instructor
Praise (for task performance) given to students	Software
Mild reproach given to students	Software
Neutral feedback given to students	Software
High percent of time spent on task	Both
Student behavior controlled	Instructor
Students warned vs. threatened over misconduct	Instructor
Learning tasks controlled	Software
Thinking tasks controlled	Software
Questions asked	Software
Feedback provided	Software
Student behavior monitored	Instructor
Attitude created that students are accountable for their performance/achievement	Both
Frequent but short interactions held	Instructor
Presentations are:	
clear	Software
structured	Software
organized	Software
Negative Behaviors	
Strong criticism given to students	Software
Negative climate created	Instructor
Non-response questions asked	Software
Time spent on non-academics	Instructor
Affective nature of course emphasized	Instructor
Instructor fails to interact with students	Instructor
Instructor employs silent reading, independent study, or written assignments	Both

[a]Soft = Software.
Inst = Instructor.

Table 9. **Stephenson Effective CBT Instructor Dimensions**

Dimensions Controlled by the Instructor in CBT

1. Instructor attitude/orientation/role definition

   internal locus of control
   can do attitude
   planning/time management oriented
   must spend time-on-task
   personally responsible for student's performance
   task oriented

2. Classroom atmosphere/ethos

   learning environment
   pro-performance vs. pro-compliance
   task oriented
   warmth
   student held accountable for work

3. Classroom management

   few target errors
   few timing errors
   pro-active
   organized (plan ahead)
   brief transitions

Dimensions Controlled by Both the Instuctor and the Software in CBT

4. Knowledge of material

5. Active teaching

   available for/offer assistance
   monitor class work
   interact with students (task and non-task)
   praise (for task performance)

Dimensions Controlled by the Software in CBT

6. Content covered/time on task

7. Consistent success/academic learning time

   70% - 80% correct response

8. Presentation skills/behaviors

   clarity
   variety
   information provided
   feedback provided
   number of questions asked
   type of questions asked

has less time available for classroom management, discipline, and atmosphere. Since traditional instruction skills and classroom administration skills may be independent dimensions, the CBT instructor may be a different person than the TI instructor.

Second, TI instructors may have difficulty transitioning to CBT. The presentation skills which previously earned high instructor evaluations (and which constituted a major part of time spent) are not used in CBT. Moreover, it may be that TI instructors want to instruct in the TI mode and that instructing in the CBT mode provides less satisfaction. The effective TI instructor may not be an effective CBT instructor either because TI skills are not used in CBT or because CBT instructing does not have the same degree of satisfaction. Simply re-training the effective TI instructor may not produce an effective CBT instructor.

Third, it may be that ignoring the differences in TI and CBT has resulted in effective TI instructor behaviors essentially getting lost in the transition. For example, in addition to effective TI course material presentation tasks not being considered in CBT, class administration tasks which are often closely interwoven with presentation of the material may also be neglected. This neglect occurs either because the CBT implementation does not insure that the effective instructor behaviors are included in the design process or because the CBT instructor, not being aware of or realizing the importance of these class management behaviors, fails to emphasize or include them in the new environment. Not only do CBT instructors have less to work with, they may not properly use the fewer behaviors still under their control.

Fourth, the failure to insure that effective instructor behaviors are included in CBT could account for the lack of success in some CBT courses. If, as is sometimes the case, CBT does not result in significant increases in performance, it may be that the cause for the non-success was the lack of effective instructor behaviors being included in the new CBT course. The small achievement gains which resulted from the adoption of a CBT format were not enough to overcome the decrease in achievement caused by the elimination of effective instructor behaviors.

The appropriateness of these implications and suggestions is contingent upon whether or not effective TI instructor behaviors transfer to CBT. It is also acknowledged that as a CBT course moves away from complete automation (which is the assumption for this paper) the role of the CBT instructor may be more similar to that of the TI instructor.

IX. CONCLUSION

The conclusion of this paper is that it would be valuable to the future of CBT to define the optimum role of the instructor in CBT. The first need is to determine the CBT instructor behaviors which most influence academic achievement. If there are instructor behaviors which maximize academic achievement in TI, there must also be instructor behaviors which maximize achievement in CBT. A logical assumption would be that some if not all of the effective TI behaviors would also prove effective in CBT. However, this assumption should be subjected to research verification. Finally, it is suggested that CBT instructor selection, training, and evaluation should be examined in light of the implications presented in this paper.

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